



π IN THE SKY⁹

How much light can we shine on the Moon's darkest craters?

See for yourself how pi can take you to infinity and beyond!

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LUNAR LOGIC

NASA's Lunar Flashlight mission will observe and map the location of frost within permanently shadowed craters in the Moon's south polar region. Knowing how much frost is in these craters and where to find it can help us prepare for extended missions on the Moon, when water will be a valuable resource.

The spacecraft, a backpack-size cubesat, will collect data during 10 orbits over a two-month period, making repeated measurements over multiple points to map ice in these dark craters. To take measurements, Lunar Flashlight will send infrared laser pulses to the surface of the Moon and measure the signal that is reflected. The amount of light that is reflected back will help scientists determine where the lunar surface is dry and where it contains water-ice.

At 20 km altitude, the spacecraft's infrared lasers have a radius of 17.5 meters when they reach the surface of the Moon. How much area do they cover in a single pulse?

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